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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,949	06/17/2005	Koji Tanaka	3620-P03647US00	6825
110 7590 11/06/2007 DANN, DORFMAN, HERRELL & SKILLMAN 1601 MARKET STREET SUITE 2400 PHILADELPHIA, PA 19103-2307			EXAMINER NGUYEN, KIMBINH T	
			ART UNIT 2628	PAPER NUMBER
			MAIL DATE 11/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,949

Applicant(s)

TANAKA ET AL.

Examiner

Kimbinh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to amendment filed 08/27/07.
2. Claims 1-17 are pending in the application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter "the linking is performed by sending and receiving the linkage identifier for the shape element" which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan et al. US 2005/0168460 A1 in view of Kimura et al. (7,79,907).

Claim 1, Razdan et al. discloses a three-dimensional shape data acquisition unit (3D acquired data 122 such as that generated by the data acquisition device 130) for acquiring the three-dimensional shape data stored in a data storage unit (the databases for storing various data element; fig. 1; paragraphs 0089, 0090, 0098, 0099); Kimura et al. discloses a three-dimensional shape information generation unit (the reference relationship information generator 31) for generating at least two types of shape information (the geometry data for parts and design information; col. 2, lines 44-50; col. 7, lines 40-62; col. 11, lines 4-34) related to each shape element based on parameters entered by a user (is clicked on by the designer; col. 9, line 36 through col. 10, line 65); a linkage identifier setup unit (the geometry data display unit) for adding a linkage identifiers to link, for each shape element, among said at least two types of shape information, when generating the shape information (col. 8, lines 8-12); a shape information storing unit (information storage unit 33) for storing said shape information having said linkage identifier in the data storage unit (col. 10, lines 32-44); and a shape information linkage control unit for, while referring to said linkage identifiers, linking and processing among said at least two types of shape information related to a particular shape element selected by the user (is selected by the digital document selector 11), wherein the linking is performed by sending (transmitted) and receiving the linkage identifier for the shape element (col. 8, line 56 through col. 9, line 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the linkage information taught by Kimura into the 3D data acquisition means of Razdan, because it would provide a method for enabling the computer to generate,

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embed and display in an element of the geometry data, the linking information of a digital document that is a reference target, based on the reference relationship information (col. 4, lines 55-65).

Claim 4, Razdan et al. discloses said linkage identifier setup unit generates linkage identifiers based on information concerning said shape elements included in said three-dimensional shape data (3D surface data; paragraph 0090).

Claim 5, Kimura et al. discloses said shape information linkage control unit comprises a plurality of information processing modules (digital document relative module 10, geometry data relative module 20, reference relationship relative module 30) for displaying said shape information, and a linkage control module connected to said plurality of information processing modules, wherein upon the indication of a specific shape element related to the shape information displayed by said information processing modules, the linkage identifier corresponding to that shape element is sent to said linkage control module, and in turn, said linkage control module sends said identifier to each information processing module so that each information processing module changes, by a specified method, its display for the shape elements that correspond to said identifier (col. 6, line 54 through col. 7, line 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the plurality modules taught by Kimura into the 3D data acquisition means of Razdan, because it would provide information for design produce shapes substantially similar to final products and it is easy to identify the shapes that are to be

produced; col. 1, lines 23-27).

Claim 6, the rationale provided in the rejection of claim 1 is incorporated herein.

Claim 7, the rationale provided in the rejection of claim 1 is incorporated herein. In addition, Razdan et al. teaches a computer software program for acquiring shape information from 3D shape data using a computer system comprising a computer readable medium (paragraphs 0091,0092).

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan et al. US 2005/0168460 A1 in view Kimura et al. (7,079,907) and further in view of Dessureault et al. (7,065,476).

Claim 2, Dessureault et al. discloses the three-dimensional shape information generation unit successively acquires, based on the physical and logical organizations of said three-dimensional shape data (col. 7, lines 40-61), each type of shape information related to said shape elements making up such physical and logical organizations (col. 9, line 46 through col. 10, line 13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the shape information related to said shape elements making up such physical and logical organizations taught by Dessureault into the 3D data acquisition means of Razdan, because it would provide for the ability to easily resize the dimensions for the component and/or to lookup/replace components with similar function and properties (col. 7, lines 55-57).

Claim 3, Dessureault et al. discloses said three-dimensional shape information generation unit acquires, on said shape element basis, information regarding the shape

element's name, attributes, two-dimensional vector data, and image data as said shape information (col. 7, lines 19-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the shape information taught by Dessureault into the 3D data acquisition means of Razdan, because it would provide for the ability to easily resize the dimensions for the component and/or to lookup/replace components with similar function and properties (col. 7, lines 55-57).

6. Claims 8-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan et al. US 2005/0168460 A1 in view Kimura et al. (7,079,907) and further in view of Itoh et al. (6,741,242).

Claim 8, Razdan et al. discloses a shell for expressing the actual object of a shape (a triangle mesh), including geometric and topological information (paragraph 0238); Itoh et al. teaches a group for expressing the structure of a shape, including a name of a part, positional information, and attribute information; a layer for logically summing up elements included in a shape, including the name of the layer and attribute information (fig 12); and attribute information for setting elements of the group or layer, said attribute information comprising numerical values (set timer) or character strings (fig. 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the data groups taught by Itoh into the 3D object data of Razdan, because it would construct a scene graph for a 3D display (col. 28, lines 30-31).

Claim 9, Itoh et al. discloses all the groups within the shape data is expressed by groups having hierarchical structures, and the group comprises an end group in a hierarchical structure containing at least one shell (fig. 12). It would have been obvious

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to one of ordinary skill in the art at the time the invention was made to incorporate the data groups taught by Itoh into the 3D object data of Razdan, because it would construct a scene graph for a 3D display (col. 28, lines 30-31).

Claim 10, Itoh et al. discloses the layer is defined independently from the physical structure which expresses the actual object of the shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the layer taught by Itoh into the 3D object data of Razdan, because it would construct a scene graph for a 3D display (col. 28, lines 30-31).

Claim 11, Kimura et al. discloses the shape information generation unit is capable of acquiring an attribute table for providing group information containing linkage identifier and attribute information (col. 9, line 36 through col. 10, line 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the plurality modules taught by Kimura into the 3D data acquisition means of Razdan, because it would provide information for design produce shapes substantially similar to final products and it is easy to identify the shapes that are to be produced; col. 1, lines 23-27).

Claim 12, Kimura et al. discloses the shape information generation unit is capable of acquiring an attribute table for providing layer information containing linkage identifier and attribute information (col. 9, line 36 through col. 10, line 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the plurality modules taught by Kimura into the 3D data acquisition means of Razdan, because it would provide information for design produce shapes

substantially similar to final products and it is easy to identify the shapes that are to be produced; col. 1, lines 23-27).

Claim 13, Itoh et al. discloses the attribute table is configured to summarize information of the numerical values or character strings established in groups (figs. 16 and 19).

Claim 14, Itoh et al. discloses the attribute table is configured to summarize information of the numerical values or character strings established in layers (fig. 16).

Claim 15, the rationale provided in the rejection of claims 1 and 5 are incorporated herein.

Claim 16, Itoh et al. discloses the three-dimensional shape data acquisition unit is configured to acquire data in the XVL format (col. 27, lines 40-42).

Claim 17, the rationale provided in the rejection of claims 1 and 8 are incorporated herein.

Response to Arguments

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimbinh T. Nguyen whose telephone number is (571) 272-7644. The examiner can normally be reached on Monday to Thursday from 7:00 AM to 4:30 PM. The examiner can also be reached on alternate Friday from 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached at (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 4, 2007

A handwritten signature in black ink, appearing to read "Kimbinh T. Nguyen". The signature is fluid and cursive, with the first name "Kimbinh" being more prominent.

KIMBINH T. NGUYEN
PRIMARY EXAMINER